(PART of PRELIM AMDT)

What is claimed is:

17. An imaging system for imaging electromagnetic radiation in an optical spectral range, comprising at least one lens element and at least one first and one second optical functional interfaces through which the electromagnetic radiation can pass, the at least one first and the at least one second optical functional interfaces having at least in sections, a cylinder lens geometry or a cylinder lens-like geometry, so that the at least first and the at least one second optical functional interfaces each have a direction which lies in the at least one first and that at least one second optical functional interfaces and along which at least in sections a curvature of the surface is essentially constant, a direction of essentially constant curvature of the at least one first optical functional interface to the direction of essentially constant curvature of the at least one second optical functional interface being aligned roughly perpendicular to one another, wherein the at least one first, or the at least one second optical functional interface, or both, have an aspherical cylinder lens geometry, or an aspherical cylinder lens-like geometry.

18. The imaging system as claimed in claim 17, wherein the aspherical cylinder lens geometry or the aspherical cylinder lens-like geometry is formed by an elliptical, hyperbolic or parabolic cylinder section.

19. The imaging system as claimed in claim 17, wherein there are at least two lens elements, on one of the lens elements there being a first optically functional interface and on the other of the lens elements there being a second optically functional interface.

20. The imaging system as claimed in claim 19, wherein the at least two lens elements each comprise one of the first or

second optically functional interfaces and a planar entry or an exit surface opposite the interfaces.

21. The imaging system as claimed in claim 17, wherein there is at least one additional correction element with at least one third optically functional interface which has at least in sections a cylinder lens geometry or a cylinder lens-like geometry so that the at least one third optically functional interface has a direction which lies in a surface and along which at least in sections a curvature of the surface is essentially constant.

22. The imaging system as claimed in claim 21, wherein a direction of essentially constant curvature of the at least one third optically functional interface is aligned at an angle of roughly 45° to a direction of essentially constant curvature of at least the at least one first and the at least one second optically functional interfaces.

23. The imaging system as claimed in claim 21, wherein the at least one correction element has two third optically functional interfaces opposite one another, with a direction of essentially constant curvature being aligned essentially perpendicular to one another and at an angle of roughly 45° to the directions of essentially constant curvature of at least the at least one first and the at least one second optically functional interfaces.

24. The imaging system as claimed in claim 21, wherein the at least one third optically functional interface is concave.

25. The imaging system as claimed in claim 21, wherein the at least one third optically functional interface has a spherical or aspherical cylinder lens geometry or cylinder lens-like geometry.

(PART of PIOLM AMDT)

26. The imaging system as claimed in claim 25, wherein the aspherical cylinder lens geometry or the cylinder lens-like geometry of the at least one third optically functional interface is formed by an elliptical, hyperbolic or parabolic cylinder section.

27. The imaging system as claimed in claim 21, wherein the are at least one lens element and the at least one correction element are on a common carrier.

28. The imaging system as claimed in claim 17, wherein the at least one lens elements are arrays or linear lines of identical lens elements.

29. The imaging system as claimed in claim 21, wherein the at least one correction elements are arrays or linear lines of identical correction elements.

30. An objective lens comprising an imaging system as claimed in claim 17.

31. A sensor comprising an imaging system as claimed in claim 17.

32. A camera comprising an imaging system as claimed in claim 17.